Diagnosing and Managing Cash Flow Problems

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Factsheet

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While all business owners hope their businesses will never have financial problems, in reality, most businesses experience financial pressure at some point in their existence. This Factsheet is designed to help you diagnose a cash flow shortage and take some steps toward correcting it.

The sooner you can diagnose the problem, the better. Early diagnosis gives you more time to make decisions and more options concerning your farm business.

EARLY WARNING SIGNS — CASH FLOW

Most farm businesses become aware of potential financial problems when cash flow becomes tight. Obligations become increasingly difficult to meet in the short and medium term. This may indicate a temporary short-term problem (such as a poor growing season) that will correct itself in time, or it may indicate a more serious long-term problem.

Your first step is to determine if the problem is short or long term. The distinction between the two is important. Long-term problems require significant business adjustments to correct and, if left uncorrected, have the potential to result in business failure.

THREE-STEP ANALYSIS OF CASH FLOW

There is a simple three-step approach to diagnosing a cash flow problem.

Step 1 Determine if the current cash flow shortage is short or long term.
Step 2 Calculate business equity.
Step 3 Identify the primary cause of the cash flow problem.

Once these steps are completed, you can determine what options are available.

STEP 1 – Determine if the current cash flow shortage is short or long term.

Projected Debt-Servicing Capacity Worksheet

Complete a projected debt-servicing capacity worksheet to indicate if you have enough cash to cover all your obligations in the coming year. Include both an optimistic and a pessimistic forecast. While you hope for the optimistic outcome, you should be prepared for the pessimistic one.

The debt-servicing capacity worksheet summarizes several key pieces of financial information. Likely, you will need to gather information from other records to come up with the following:

- farm cash revenue and expenses
- off-farm income or other owners' contributions
- owners' withdrawals — how much is required from the business to cover personal living expenses and taxes
- reserve for asset acquisition — this could be a depreciation figure or an estimate of the funds needed in the coming year to make capital purchases

Include the value of saleable inventories on hand in the calculation of farm cash revenue, as well as the value of saleable inventory that you expect to have in storage in your cash revenue projections.

Table 1, *Debt-servicing capacity*, shows an example of the calculation. Appendix 1, on page 6–7, includes a worksheet for your use.

Back of the envelope analysis — The information summarized in the debt-servicing capacity worksheet on page 7, can also be used to project break-even prices for crops or livestock. The total of principal and interest payments, owner's withdrawals and operating debt can be divided by the projected production to determine the break-even price needed.

Ministry of Agriculture, Food and Rural Affairs

Ontario

Table 1. Debt-servicing capacity

PROJECTED YEAR	
+ farm cash revenue	$380,000
– farm cash expenses	$328,000
= *Net Cash from Operation*	$52,000
+ interest payments	$18,000
+ owner's contributions	$8,000
– owner's withdrawals (including taxes)	$42,000
= *Cash Available for Principal and Interest*	$36,000
– principal and interest payments	31,000
= *Cash Available After P & I Payments*	$5,000
– depreciation or reserve for asset acquisition	$20,000
= ***Debt-Servicing Capacity***	***($15,000)***

This example shows that there is cash available to cover the interest and principle payments but not enough to cover depreciation. Depreciation or a reserve for asset acquisition is used to replace assets as they wear out. In this example, a shortage of $15,000 exists.

STEP 2 – Calculate business equity.

Knowing your equity position enables you to judge the business's ability to survive the cash shortage. A cash flow shortage that persists ultimately reduces the owner's equity. High-equity businesses have the ability to withstand a longer and more serious cash flow shortage because they can re-borrow against their equity. Businesses with low equity are unable to tolerate cash flow shortages and therefore are at much greater risk.

Knowing your equity position also allows you to pre-determine the minimum level of equity that you wish to maintain in the business. This is important, because the equity in the farm business represents the retirement savings for many farmers. It is important to protect that investment. You may, for example, decide that you will not let your equity percentage fall below a certain amount, say $500,000. If you know your current equity position and the projected cash shortfall, you can calculate if you are at risk of falling below that amount.

Equity can be determined by subtracting your total liabilities from your total assets. To determine the equity as a percentage, divide your equity by your total assets and multiply by 100.

The equity of the business is always stated on the balance sheet, but it can vary widely, depending on how the assets are valued. Statements prepared for accounting purposes use cost less depreciation to value assets, which is the purchase cost of the asset minus the depreciation taken for tax purposes. Statements prepared for lenders use fair market value, which is the sale value of the asset. For the purpose of evaluating your business equity, use conservative fair market values.

$$\frac{\text{equity} \times 100}{\text{total assets}} = \text{percent equity}$$

Equity example: $\frac{420{,}000 \times 100}{650{,}000} = 64\%$

STEP 3 – Identify the primary cause of the cash flow problem.

The most important and most difficult step in the process is identifying the cause of the cash flow shortage. This can be done by examining the efficiency, scale and debt structure of the business.

Efficiency

Some producers might immediately feel defensive when the word efficiency is used. Often they have worked very hard at becoming more efficient, only to see returns diminish. Sometimes this is because of depressed commodity prices. However, it is important to determine if the cash flow problem will continue even after prices increase. If the efficiency of the business is even slightly below average, even good prices may not generate the profits needed to maintain a positive cash flow.

Efficiency is measured by the physical and economic output of the business. Because there is no one measurement of efficiency, you must look at a combination of physical and economic measurements such as yield per acre or variable costs per unit of output.

Table 2, *Farm case study*, compares the financial figures of two sample farms. Farm 1 has a higher cost of producing a dollar of product and a higher percentage of variable costs. This suggests that efficiency may be a problem and the reasons for these differences should be investigated further.

Scale of the Business

Scale refers to the size of the business. Farms can be too large or too small in relation to the amount of labour used in the business. In large, complex operations, managerial control may be spread too thin.

Table 2. Farm case study

Case Study Comparison	Farm 1	Farm 2
+ farm cash revenue	$524,000	$330,000
– farm cash expenses	$439,000	$275,000
= *Net Cash From Operation*	$85,000	$55,000
+ interest payments	$35,000	$18,000
+ owner's contributions	$4,000	$15,000
– owner's withdrawals	$68,000	$41,000
= *Cash Available for Principal and Interest*	$56,000	$47,000
– principal and interest payments	64,000	51,000
= *Cash Available After Principal and Interest Payments*	*($8,000)*	*($4,000)*
– depreciation or reserve for asset acquisition	$26,000	$19,000
= **Debt-Servicing Capacity**	**($34,000)**	**($23,000)**

Profitability	Farm 1	Farm 2	Benchmarks
Net income (accrual)	$59,000	$36,000	
Return on assets	4.9%	9.0%	9.5%
Return on equity	11.80%	10.0%	11.4%
Financial Strength			
Equity	41.7%	60.0%	65.8%
Financial Efficiency			
Cost of producing $1 of product	$0.84	$0.78	$0.56
Variable costs as % of revenue	83.8%	70.3%	63.5%
Scale			
Full-time person equivalents	2	1.5	
Animals produced per person	1,510	1,980	
Debt Structure			
Debt-to-asset ratio	0.58:1	0.40:1	0.34:1
Percentage of current liabilities compared to total liabilities	14.0%	41.7%	27.3%

Cautionary Note About Ratios — Whenever ratio or financial indicators are used, it is important to remember that a ratio outside a normal range is just a flag to prompt you to investigate further. In many cases, there may be an explanation for the abnormal figure. Ratios cannot be used on their own to diagnose the problem; they only help you narrow down your search.

In smaller farms, there may be too much labour. Or in farms where only the owner is employed in the business, the scale of the farm may still be too small to fully support their labour, creating a cash flow shortage.

Where this occurs, the options available are to further increase the size of the business, decrease costs or attempt to find a higher-value product that generates larger margins.

One method of accessing scale is to examine the efficiency of labour usage in the business and compare it to similar operations. In Table 2, Farm 1 has a below-average number of animals produced per person. In this case, there may be too much labour on Farm 1, or the business is too small.

Debt Structure

Debt structure is the term used to describe the factors that determine the size of your principal and interest payments. These factors are interest rate, size of the debt, the length of the term and the proportion of short-term debt to long-term debt. Each of these can affect the size of the debt payment required, which, of course, impacts the cash flow of the business.

A farm business can limit its efficiency, scale and earning capacity by deciding to use little or no debt capital. For the most part, however, debt structure problems arise when the debt load is excessive, too expensive or must be paid off over too short a term.

Some debt structure problems are relatively easy to resolve — for example, lengthening loan terms to improve cash flow. Most, however, involve adjusting the asset or liability structure of the business. Farmers might sell assets and reduce liabilities. Or they may simply attempt to eliminate assets that have debt service requirements in excess of their cash-generating potential.

Farm 2 in the Table 2 case study appears to have too much short-term debt. The percentage of current liabilities to total liabilities at 41.7% suggests that the term on the debt may be too short. (The amount of principal and interest that is due in the current year is considered a current liability.)

TROUBLESHOOTING WITH A DIAGNOSTIC TREE

Figure 1, *Financial troubleshooting diagnostic tree*, is a tool that helps examine the efficiency, scale and debt structure of a farm business. Use the decision tree to determine which areas of the business need fixing.

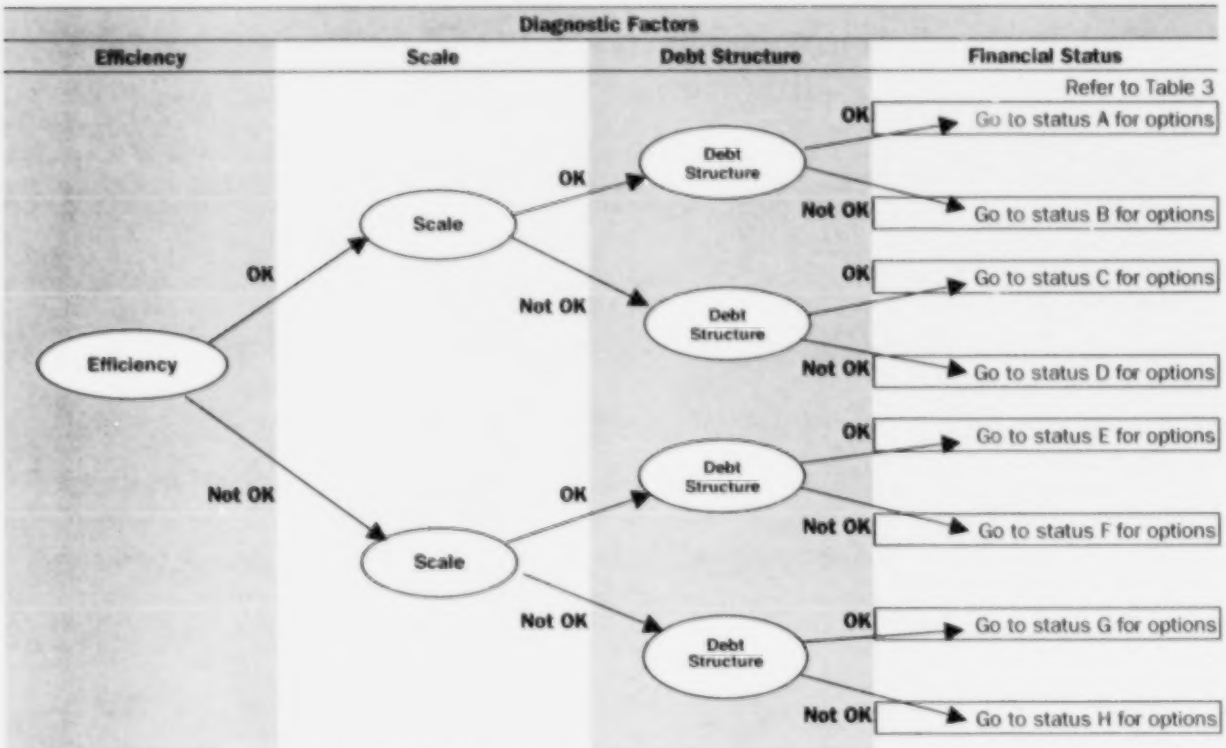
While this oversimplifies the process, it helps show how efficiency, scale and debt structure can be addressed and what action might be appropriate to remedy each problem. The choices facing a farm business can vary quite widely. A farm business with acceptable efficiency but unacceptable scale and debt load faces choices quite different from a farm with poor efficiency, acceptable scale and unacceptable debt load.

Further, there is always a question of which problem should be fixed first.

Table 3, *Financial strategies for change*, on page 5, presents several management courses of action for each branch on the diagnostic tree. The lists are not exhaustive. They simply illustrate ways in which cash flow problems might be resolved, given a farm's efficiency, scale and debt structure.

If you do not want to use the decision tree, complete this checklist, then refer to Table 3.

	OK	Not OK
Efficiency	❑	❑
Scale	❑	❑
Debt structure	❑	❑



Efficiency is measured by the physical and economic output of the business. Look at a combination of physical and economic measurements, such as yield per acre or variable costs per acre.

Scale simply refers to the size of the business. The efficiency of the labour usage compared to other similar operations is one method of assessing scale. Farms can be too large or too small. In some cases, labour usage is efficient but the overall size of the business is too small to generate sufficient revenue.

Debt structure refers to the factors that determine the size of your principal and interest payments. The interest rate, size of the debt, length of the term and proportion of short-term debt to long-term debt can impact the cash flow of the business.

Table 3, *Financial Strategies for Change*, presents several management courses of action for each branch on the diagnostic tree.

Figure 1. Financial troubleshooting diagnostic tree

Table 3. Financial strategies for change

Financial Status	Efficiency	Scale	Debt Structure	Strategies for Increasing Profitability or Making Changes
A	OK	OK	OK	• Continue to monitor financial performance. • Develop strategic plans, goals and target objectives for the business. • Employ cost-effective new technology. • Examine potential for expansion and additional marketing channels. • Evaluate investment strategies, including off-farm investments.
B	OK	OK	Not OK	• Restructure debt to improve cash flow. • Consider selling non-productive assets to reduce debt. • Investigate the option of leasing assets.
C	OK	Not OK	OK	• If operation is too large consider downsizing or adding staff. • If scale is too small, consider adding or expanding the enterprise. • Identify any low-cost ways to increase scale of business, such as renting additional land or facilities, custom feeding livestock, crop-share renting vs. cash renting or custom crop farming. • Examine machinery, labour and other assets to determine if they are fully utilized. • Evaluate if any value-added opportunities exist in current business or if higher-value products can be produced. • Consider increasing off-farm employment, but assess its effect on efficiency.
D	OK	Not OK	Not OK	• Consider possible solutions to scale of business first to determine if they would reduce the debt structure issues. See Section C strategies, above. • See Section B, above, for debt structure strategies. • Attempt to increase off-farm income, but assess its effect on efficiency. • Evaluate if downsizing the business is necessary to allow an increase in off-farm income.
E	Not OK	OK	OK	• Analyze records to determine where efficiency must be improved. • Focus on 3–5 key areas and use these to set management priorities. • Evaluate business operating costs and family living expenditures. • Evaluate whether the operation is too large to manage efficiently. • Consider if investment in cost-effective technology, equipment or facilities would increase efficiency. • Evaluate if purchasing key management and/or advisory services would increase efficiency. • Consider joint ventures with other farmers as a way to leverage efficiencies. • Consider increasing off-farm employment, but assess its effect on efficiency.
F	Not OK	OK	Not OK	• Determine if debt structure problems can be reduced or eliminated by correcting efficiency. See Section E, above. • Determine if correcting only the debt structure problem will cause the problem to develop again in the future if efficiency is not corrected. • See Section B, debt structure strategies, above.
G	Not OK	Not OK	OK	• Determine if increased efficiency will correct or reduce the scale issues. • See Sections E for efficiency and C for scale strategies, above. • If strategies for correcting cash flow are not adequate, evaluate if placing resources in other investments will generate a greater return. • Consider off-farm employment opportunities and preferences.
H	Not OK	Not OK	Not OK	• Determine if resolving this difficult situation is a primary goal. • Seek farm management advisory services to determine if the business plan for correcting the cash flow problem is realistic. • Consider the impact on family, health and marriage. • Evaluate if exiting the business now will provide the most equity. • See above Sections B, C and E for suggested actions.

Some of the suggestions listed above require that you do further analysis. See Appendixes 1–5 of this Factsheet:

Appendix 1 — Debt Servicing Capacity Worksheet
Appendix 2 — Government Programs
Appendix 3 — Preparing Cash Flow Statements
Appendix 4 — Financial Analysis Resources
Appendix 5 — Meeting With Your Lender

SUMMARY

Examining the three areas of efficiency, scale and debt structure is important in diagnosing a cash flow problem. The next few pages outline possible action steps that can be taken once a cause is identified. Not all of the solutions will be applicable to individual situations. Also, it is clear that some of the suggested solutions may be difficult to implement because they require significant changes to the business or family members or both. Nevertheless, when a cash flow shortage is a long-term problem, decisive action must be taken.

Consider the following general advice in times of cash flow shortages.

Devote time to examining and preparing financial statements such as the balance sheet and cash flow statements. If this is not your strength, get help from a trusted advisor.

Seek the help of advisory services such as those outlined in Appendix 2.

Aggressively pursue production and market price risk management strategies such as crop insurance and government business risk programs, when it is cost effective to do so. Also consider commodity marketing strategies such as forward contracting, futures and options, as part of an overall marketing strategy. Risk management is especially critical if you are experiencing financial stress and, therefore, have little tolerance for downside events.

APPENDIX 1
DEBT-SERVICING CAPACITY WORKSHEET

Using the worksheet, first calculate your debt-servicing requirements, then calculate your debt-servicing capacity.

Your current **debt-servicing requirement** is the total principal and interest payments you must pay in the coming year.

The **debt-servicing capacity** is the ability to pay annual interest and principal after other cash and family living expenses have been paid.

Debt-servicing capacity is usually calculated on a cash basis. The exception is the inclusion of crops in storage. Some banks allow these to be included if they are readily available for sale.

Debt is paid from cash flowing into the business. This would include not only farm sources of cash income but also off-farm and personal income. Likewise on the expense side, farm expenses are not the only requirements for cash. Personal living expenses, income tax and reserve for purchasing assets are also considered.

> Note that liabilities are usually separated into two types, current and term liabilities.
>
> **Current liabilities**: items that must be paid in the coming year.
>
> **Term liabilities:** longer-term obligations that require only a portion of the debt to be paid in the current year. This would include accounts payable, property tax arrears and bank operating loans.

Debt-servicing capacity worksheet

DEBT-SERVICING REQUIREMENTS

(When using as a projection, include new loans)

For the period: Name:

CURRENT LIABILITIES	Balance Start of Year	Interest Rate	Annual Payments		Balance End of Year
			Interest	Principal	
Accounts Payable:					
Total Accounts Payable					
Operating Loan:	Loan Description:				
Total Operating Loan		—			

TERM LIABILITIES	Balance Start of Year	Interest Rate	Annual Payments		Balance End of Year
			Interest	Principal	
Loan Description:					
Sub-total		—			
Grand Total		—			
Total Interest and Principal Payments					

DEBT-SERVICING CAPACITY

PREVIOUS YEAR		PROJECTED YEAR	
+ farm cash revenue		+ farm cash revenue	
– farm cash expenses		– farm cash expenses	
= Net Cash from Operation		= Net Cash from Operation	
+ interest payments		+ interest payments	
+ owner's contributions		+ owner's contributions	
– owner's withdrawals		– owner's withdrawals	
= Cash Available for Principal and Interest	$	= Cash Available for Principal and Interest	$
– principal and interest payments		– *Principal and Interest Payments*	
= Cash Available After P & I Payments		= Cash Available After P & I Payments	
– reserve for asset acquisition		– reserve for asset acquisition	
= Debt-Servicing Capacity (the amount available for interest and principal payments on new debt)		= Debt-Servicing Capacity (the amount available for interest and principal payments on new debt)	

APPENDIX 2
GOVERNMENT PROGRAMS

Government assistance programs can help you manage cash flow shortages in some cases. For example, business risk programs such as AgriStability can provide income support.

Under the Growing Forward programs for Business Development, there are opportunities to access cost-shared advisory services financial assessments, training or advanced business planning. The Ontario Soil and Crop Improvement Association is delivering the program for OMAFRA. For full details, visit their website at www.ontariosoilcrop.org or call them at 1-800-265-9751.

For a complete listing of OMAFRA programs, see the OMAFRA Factsheet *Programs and Services for Ontario Farmers*, Order No. 09-053.

APPENDIX 3
PREPARING CASH FLOW PROJECTIONS

The cash flow projection is an extremely useful management document. It predicts cash shortages and shows which expenses and revenues have the greatest impact on your business. It also highlights when your credit demands will be the greatest. The cash flow projection does not monitor the changes in receivables, payables and inventory. These can be reviewed by examining your income statement and balance sheet.

Preparation of a Cash Flow Projection

A cash flow projection is an estimate of when and where cash inflow and cash outflow will occur in the coming year. It includes cash inflows from:

- farm operations
- borrowing and non-farm sources

and cash outflows from:

- farm operating
- capital purchases
- taxes
- family living
- debt payments

Only cash items are included in the inflows and outflows. Make your projections conservatively.

There are two ways of preparing a cash flow projection:

Alternative A

Use records of the previous years as a guide, increasing or decreasing costs to reflect inflation, changes in acreage or livestock numbers, and capital expenditures.

Alternative B

When previous records are not available or when changes are so great that a new farm business barely resembles the old, start from scratch. Prepare budgets for each enterprise. Then combine them with overhead and family living expenses.

A cash flow projection may be set up for various time periods, usually monthly, quarterly or annually. Set up an annual projection, as a starting point, then modify it to a quarterly or monthly version, if necessary.

Monitoring a Cash Flow Projection

Monitor your cash flow projections monthly, quarterly or annually to correspond to the cash flow projection format. Monitoring will reveal differences between the actual and the projected, which allows you to consider what adjustments to the business must be made.

APPENDIX 4
FINANCIAL ANALYSIS RESOURCES

The following is a list of resources that can help you in preparing a cash flow projection and other useful analysis information. All are available on OMAFRA's website, www.ontario.ca/agbusiness.

Computer Tools

Farm Business Analyzer — an Excel spreadsheet that analyzes your business using the figures from your farm income tax statement. It also allows you to analyze the effects of changing revenue, variable expenses and family living costs on your net income.

Farm Financial Analysis and Planning Workbook, Publication 37 — an Excel spreadsheet that has a step-by-step system for producing a complete set of financial statements, including a cash flow, debt-servicing capacity worksheet and current and projected income statements.

Ontario Farm Management Analysis Project — The OFMAP program files are computer spreadsheet–based workbooks with versions tailored to each major farm commodity group. Each workbook contains comparative information based upon averages of farms received by the project. Comparative data is updated when available.

Each program will produce accrual statements. The program has built-in calculations to show financial strength, efficiency and profitability. Enterprise reports show costs and returns per unit of production.

Ontario Enterprise Budgets: Enterprise budgets are developed to help producers evaluate the economics of production decisions. A range of cost of production budgets are on the OMAFRA website.

The budgets are available in two formats: budgeting tools, which are Excel spreadsheets, and manual budget forms, which can be printed directly from the website and completed by hand.

APPENDIX 5
MEETING WITH A LENDER

If an analysis reveals that changes are necessary in the business, you will usually need to meet with your lender. Be prepared to answer the following questions:

Financial

- How did you arrive at the financial and production estimates? (past records, industry benchmarks)
- Have any major changes occurred to the farm operation lately? What have been the results of the changes?
- Do you keep up-to-date production cost figures?
- How often are accrual income statements prepared?
- Do you have enough cash flow to cover your obligations? (debt-serving capacity)
- What is the condition of your assets and do you have fair market values for your assets?
- How are you managing your risk? (insurance, government programs, value added)
- How do you compare to others in your industry? (benchmarks)

Production and Marketing

- What is your marketing strategy?
- What have been the results of this strategy for the past three years?
- Are you planning any changes to your marketing?
- How are you responding to the current market conditions?
- What is your current inventory?
- Is your production mix satisfactory? Are you adjusting your production?
- How does your production compare to others in your industry?
- What technology are you currently using?

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FOR YOUR NOTES

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